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This traineeship was set up to provide exposure to and experience with an ongoing program of applied measurement in a university setting. The program was directed toward discovering the unique techniques and problems which improve the quality and efficiency of higher education through examinations. The trainee became familiar with the daily activities in the Measurement and Research Division Office at the University of Illinois. He undertook related course work and engaged in discussions pertinent to his research topics. He also spent a sizable portion of his time researching the use of appropriate tests for freshman selection, for placement and awarding of proficiency credit for entering language students, implementation of an instructor evaluation program at the University and implementation of known techniques and research findings aimed at altering the educational practices at the University. The program was considered valuable because of the experience the trainee gained from his close involvement with the staff and his new understanding of the application of objective measures to the improvement of higher education. (CS)

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FINAL REPORT
Project No. 6 2043-24
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POSTDOCTORAL TRAINEESHIP IN RESEARCH ON MEASUREMENT AND INSTRUCTION IN HIGHER EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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POSTDOCTORAL TRAINEESHIP IN RESEARCH ON MEASUREMENT AND INSTRUCTION IN HIGHER EDUCATION

Project No. 6 2043
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Charles J. McIntyre

February, 1968

The traineeship reported herein was performed pursuant to a grant with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

University of Illinois
Urbana, Illinois

A. Introduction

This is the final report on the Postdoctoral Training Program conducted at the Office of Instructional Resources, University of Illinois, during the year of September, 1966, to August, 1967.

The Office of Instructional Resources has general responsibility for programs and projects leading to improved college instruction and, specifically within its Division of Measurement and Research, is concerned with the problems of testing and evaluation over a broad spectrum of concerns related to instruction. The Traineeship was intended to permit the opportunity for its recipient to work with specialists in measurement and research in higher education, conduct research, become proficient with advanced data processing procedures, and to become familiar with the policies and programs affecting instruction in a major university.

B. Description of the Program

Since the program involved just a single trainee, it was possible to remain quite flexible and to tailor the program to the trainee. The particular capabilities, background, and interests of the trainee were thus the primary determinants of the content of the program.

Dr. Ronald Flaugher, the trainee, came from Educational Testing Service where he had been engaged in research on testing and measurement problems, as well as test construction and assembly for that organization. He had had no experience with the application of tests in a university setting, and his desire was to discover the techniques and problems which are unique to the efforts to improve the quality and efficiency of higher education through the use of examinations.

The present program, therefore, was directed toward that end. The first few months of the period, the trainee occupied the same office with the Head of the Measurement and Research Division, becoming familiar with the daily activities and problems of that office. This general orientation continued throughout the year intermittently as new aspects of the office's

function arose, but in the latter months the trainee began to pursue in greater depth those parts of the office's function which were of special interest to him.

Simultaneously, with these basic activities, the trainee engaged in an orientation program for the remaining divisions of the Office of Instructional Resources, exposing him to the facilities and services being made available to the modern college faculty for the purposes of improving instruction.

In addition, the trainee undertook some of the formal course work which was available in the Graduate Department of Psychology and Education of the University. In the present case, this consisted of 1) Multivariate Analysis in Psychology and Education, taught by Maurice Tatsuoka, 2) Theory of Educational Evaluation, taught by the Division Head, 3) a programing course for the computer-based teaching machine, PLATO, 4) the basic Computer Systems Principles course, provided by IBM.

Some of the particular aspects of the Measurement and Research Division's activities which were of interest to the trainee and on which he chose to spend a sizable proportion of his time included the following:

1. The use of appropriate tests for the selection of entering freshmen, including the avoidance of redundant measurement, and the prediction of specific area performance.

2. Implementation of an instructor evaluation program in the University, its proper use and interpretation.

3. Problems and practices in the use of examinations for placement and awarding of proficiency credit for entering language students. (As an outgrowth of these endeavors, two research papers authored by the Director and the Trainee are being submitted for formal journal publication.)

4. Implementation of known techniques and research findings, including the education and persuasion of faculty members who are untrained in measurement techniques, toward the end of altering the educational practices of the University.

In addition to these larger interest areas, the trainee engaged in numerous discussions and meetings concerning proper research design, measurement techniques, and data summarization as they are unique to the applied setting.

In each of the above areas, the activities of the trainee included extensive reviews of the relevant literature, discussions with relevant specialists and with colleagues, and involvement with the actual data analyses and manipulation that resulted.

C. Evaluation of the Program

a. Objectives. The objectives of the program were to provide exposure and experience with a functioning program of applied measurement in a university setting. The interaction of the trainee's interests and capabilities with the facilities which were available to him served to accomplish this objective in an optimal manner. Given a different trainee with a different background, the specific activities pursued might be quite different while fulfilling the same general objectives just as adequately.

b. Trainee. The traineeship was late being approved and information was gotten out at a time when most people in academic positions would already have made commitment for the year of the traineeship. Even so, we were pleased and surprised with the number of responses and the quality of those responding. Several appointments would have been made during the first year had the funds been available. Subsequently, we have received numerous inquiries from individuals who would like to be considered for an appointment sometime in the future.

c. Budget. The budget was adequate.

2. Major Strengths or Features of the Program

The close involvement of the trainee with the daily activities of the staff was a particular strength of this program. In this setting, therefore, the selection of the appropriate trainee was of primary importance. There must be assurance that the background and interests of the selected trainee are of such a nature that they blend optimally with facilities, experiences, and personnel which the office has to offer.

The trainee himself values his experience in the program very highly. The following is an excerpt from a report written by the trainee. "He feels he has acquired a new understanding of the application of objective measures to the improvement of higher education. He plans to return to Educational

Testing Service[1] and estimates that the experiences, course work, and contacts resulting from the traineeship are invaluable and could have been acquired in no other manner. He feels he is far better qualified to conduct meaningful educational research as a result of the program and that its influences will continue to be realized in the remainder of his professional career."

3. Major Weaknesses or Difficulties

Our major problem was related to the newness of the program and the fact that we had to be late in getting information out about it. This limited the number of qualified applicants.

4. Overall Evaluation

Our observation of the trainee and comments that he has volunteered suggests that our initial assumption was substantially correct; namely, that it would be valuable to a young researcher interested in higher education to be affiliated with an organization that has as one of its major missions within a university research on the instructional process and the measurement of instructional outcomes, while at the same time offering him the opportunity to take advanced instruction in areas of interest to him.

5. Summary of Recommendations for Improving the USOE Administration of the Program

We believe now, as we did when initially applying for the traineeship, that it is beneficial for competent individuals to get the specialized experience that we were able to offer. It seems unfortunate to us that USOE has so reconstituted the program that a traineeship under conditions similar to this one are apparently no longer available.

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[1]Note that the objection of the grant program would have been better served if the trainee had remained directly in higher education. He asked to remain at the University of Illinois, but the rules of the grant not permitting that he elected to return to his former employer.

D. Program Reports

1. Publicity

An announcement of the traineeship was placed in the American Psychologist, May, 1966, issue.

An announcement copy attached was sent to deans and department heads of selected institutions, as well as to a number of selected individuals.

2. Application Summary

a. Approximate number of inquiries: about 20 (Approximately 30 additional inquiries have been received with respect to the academic year 1967-68 or beyond.)

b. Number of completed applications received 11

c. Number of first rate applications received 6

d. How many applicants were offered admission 1

3. Trainee Summary

a. Number of trainees initially accepted in program 1

Number of trainees enrolled at the beginning of program 1

Number of trainees who completed program 1

b. Categorization of trainees

(1) Number of trainees who principally are elementary or secondary public school teachers 0

(2) Number of trainees who are principally local public school administrators or supervisors 0

(3) Number of trainees from colleges or universities, junior colleges, research bureaus, etc.

Educational Testing Service 1

4. Financial Summary

	Budgeted	Expended or Committed
a. Trainee Support		
(1) Stipends	$12,000	$12,000
(2) Dependency allowance		
(3) Travel	1,200	1,200
b. Direct Costs		
(1) Personnel		
(2) Supplies		
(3) Equipment		
(4) Travel		
(5) Other		
c. Indirect Costs		
TOTAL	$13,200	$13,200

POSTDOCTORAL TRAINEESHIP IN RESEARCH ON MEASUREMENT AND INSTRUCTION IN HIGHER EDUCATION

University of Illinois

The trainee will be affiliated primarily with the Office of Instructional Resources which has general responsibility for programs and projects leading to improved instruction and, specifically, within its Division of Measurement and Research, is concerned with the problems of testing and evaluation over a broad spectrum of concerns related to instruction. He will have the opportunity to work with professionals in measurement and research in higher education, to carry on projects under supervision, to become proficient with advanced data processing procedures, and to become familiar with the policies and programs affecting instruction in a major university.

The trainee will also have the opportunity to consult with and take courses from specialists in the areas of research design, statistics, and measurement.

The award will run from September 1966 to August 1967. The stipend will be $12,000 with a maximum of $1,200 available for travel and relocation costs.

Applicants should send a resume of academic and other related experience to:

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